

REMARKS

Claims 4-7, 9-17 and 19 are canceled without prejudice. Claims 1 and 18 are amended. New claims 23-30 are added. Therefore, claims 1-3, 8, 18 and 20-30 are now pending.

Support for new claim 23 can be found in the specification: page 20, lines 2-4. Support for new claim 24 can be found in the specification: page 17, lines 8-10. Support for new claim 25 can be found in the specification: page 9, lines 9-10. New claims 26 to 30 are derived from original claims 10, 11, 12, 15 and 16., respectively.

Applicant respectfully traverses the three statutory rejections under 35 U.S.C. § 103(a) based on the Gudat/Yuan (**newly cited**) combination alone or further in view of either Hakulinen or Cable.

Because claims 4-7, 9-17 and 19 are canceled, their rejections now are moot.

The basis of Applicant's traverse is that the Gudat/Yuan combination does not teach, or even suggest, all of the limitations of the independent parent claim 1, whereby Applicant respectfully submits that the combined teachings of Gudat and Yuan are **incapable of rendering obvious** the subject matter of each of the pending claims 1-3, 8, 18 and 20-30.

More specifically, the problem to which the present invention is directed is specific to satellite networks, and the invention resides in the use of labels in the header of packets sent via satellite, with the labels identifying the particular sub-network to which the station belongs, as well as the spot in which the station is located.

Applicant will now analyze the Gudat and Yuan references, and explain why their combined teachings would not have rendered obvious the subject matter of the independent parent claim 1.

In view of the failure of the basic Gudat/Yuan combination to render *prima facie* obvious the subject matter of claim 1, it follows that the subject matter **added** by the dependent claims 2, 3, 8, 18 and 20-30 also would not have been obvious from the combined teachings of Gudat and Yuan further in view of either Hakulinen or Cable.

Non-obviousness of claim 1

In Gudat's disclosure, Examiner Mattis asserts that the "care-of address" constitutes the claimed "label field containing an identifier characteristic of a sub-network to which the target terminal station belongs". However, Gudat does **not disclose** :

that the identifier in the label field is associated with a spot (or set of spots) "including the spot in which the satellite terminal or the ground station with which the target terminal station is associated, is located";

that "at least one satellite uses the identifier contained in the header of the data packet to transmit the data packet to the at least one spot associated with said identifier"; and

that "a satellite terminal or ground station located in said at least one spot has a list of authorized identifiers used as a reception filter, so that the satellite terminal or ground station processes the data packet only if the identifier contained in the header of the data packet is in the list of authorized identifiers of said satellite terminal or ground station".

Indeed, Gudat teaches that, when a packet is sent over the wireless wide area network (WAN), the router 84 that receives the packet from the WAN 86 "forwards the packet...to the mobile router 78...over the wireless local area network 82" (col. 17, line 65 to col. 18, line 7); therefore, there is no filtering out of packets at the router 84.

In Gudat the "binding cache" of care-of addresses maintained in a correspondent node serves "to determine where to [forward] the packets destined for a mobile node" (col. 5 lines 30-32 and col. 6 lines 39-42); therefore, the binding cache is not "used as a reception filter" either. Gudat does not teach that a correspondent node decides whether or not to process "a data packet" based on the contents of a binding cache. On the **contrary**, Gudat teaches **against** such a filtering of packets because correspondent nodes must route packets to the destination, either using the "Route Optimization software" or using "basic Mobile IP" (col. 7, lines 50-54); therefore, Gudat's "binding cache" serves only to determine where a packet is forwarded or sent.

Yuan '893 discloses a cell header including a downlink beam locator 340. Satellites transmit each cell on a downlink beam corresponding to downlink beam locator 340. All the nodes "in the footprint of the downlink beam" receive the cells having the corresponding downlink beam locator (col. 7, lines 23-25). Each node processes the cells "to re-assemble" the IP packets 400 (col. 8, lines 22-23). Therefore, Yuan does **not** disclose or even suggest that a satellite terminal or ground station, located in said at least one spot, has a list of authorized identifiers used as a reception filter, so that the "satellite terminal or ground station processes the data packet only if the identifier contained in the header of the data packet is in the list of

authorized identifiers of said satellite terminal or ground station", as required by Applicant's claim 1.

Therefore, neither Gudat nor Yuan, taken alone or in combination, teaches or even suggests, the claimed "label field, containing an identifier", which is used both

(i) by a satellite "to transmit the data packet to [a spot or set of spots] associated with the identifier", and

(ii) by a satellite terminal or ground station to filter out the packets it receives, based on "the list of authorized identifiers".

Furthermore, Yuan teaches **against** this claimed feature, because Yuan teaches a network node that "discards" IP packets based on only their IP address (col. 8, lines 24-27). However, the IP address is not present in the cell header because IP packets and relay cells are different Protocol data units which are processed at different protocol layers (i.e., layer 3 vs. layer 2 of the ISO model).

Therefore, the person ordinarily skilled in the art presented with the work of Yuan and the work of Gudat would obtain a satellite telecommunications system in which a cell header (i.e., a layer 2 header) carried the identifier of a downlink beam, and an IP header (i.e., a layer 3 header) carried the identifier characteristic of an IP network to which a target terminal belongs. Indeed, both Gudat and Yuan are limited to dealing **only** with a plurality of IP networks which can be recognized by the respective network component of the IP addresses (Gudat col. 2, lines 38-46; Yuan col. 3, lines 58-62).

Applicant's claimed invention (claims 1 and 18) does not suffer from the same limitation. The above-noted feature of "an identifier" according to the claimed invention enables optimum use of satellite networks for the purpose of broadcasting or multi-casting of packets to a plurality of users belonging to a same sub-network, be it a virtual private network or a multi-recipient group or some other type of sub-network, regardless of the underlying addressing scheme (see page 22, lines 5-10 of the specification).

Thus, Applicant has explained above the flaw in the Examiner's statement that "It would have been **obvious...to combine**" the works of Yuan and Gudat to produce the subject matter of Applicant's claim 1 (and its dependent claims) or subject matter which would have rendered these claims obvious. Applicant has also explained above why there would have been no motivation (because of the disparate disclosures of Gudat and Yuan relative to Applicant's claimed subject matter) to combine the teachings of Gudat and Yuan. Furthermore, again as explained above, even if, for some reason, a person were to combine the teachings of Gudat and Yuan, there would not be produced the subject matter of claim 1 and its dependent claims, or subject matter which would have rendered obvious these claims.

Applicant appreciates the very detailed analysis of the Gudat and Yuan disclosures as presented by Examiner Mattis, and Applicant has replied in kind. Applicant respectfully submits that the above analysis explains why the basic Gudat/Yuan combination (further in view of either Hakulinen or Cable) would not have rendered obvious the subject matter of the pending claim 1 and its dependent claims; however, if for any reason the Examiner feels that the application is not now in condition for allowance, Applicant respectfully requests the Examiner to **call the**

AMENDMENT UNDER 37 C.F.R. § 1.111
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undersigned attorney to discuss any unresolved issues and to expedite the disposition of the application.

Applicant files concurrently herewith a Petition (with fee) for an Extension of Time of One Month. Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this application, and any required fee for such extension is to be charged to Deposit Account No. 19-4880. The Commissioner is also authorized to charge any additional fees under 37 C.F.R. § 1.16 and/or § 1.17 necessary to keep this application pending in the Patent and Trademark Office or credit any overpayment to said Deposit Account No. 19-4880.

Respectfully submitted,

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